

中文



STATE INTELLECTUAL PROPERTY OFFICE OF THE P.R.C.

HOME

ABOUT SIPO

NEWS

LAW PUBLIC

SPECIAL TOPIC

CHINA IP NEWS

## Title: Preparation of polyoxyalkylene-alpha, omega-dicarboxylic acids

Application Number	93112976	Application Date	1993.12.22
Publication Number	1091439	Publication Date	1994.08.31
Priority Information	US9962681/992/12/24		
International Classification	C07C51/16;C07C59/305;C08G65/32		
Applicant(s) Name	Shell Internationale Research Maatschappij B.V.		
Address			
Inventor(s) Name	H.E. Fried		
Patent Agency Code	11038	Patent Agent	DONG JIAYANG

## Abstract

A process for the preparation of separating out a polyoxyalkylene-alpha, omega-dicarboxylic acid by reacting the corresponding polyoxyalkylene glycol with a stable free radical nitroxide in the presence of a NOx-generating compound and optionally, an oxidant and/or a solvent, at a temperature in the range of from 0 DEG C to 100 DEG C.

Machine Translation

Close

## Claim

1, the method of preparation following formula polyoxyalkylene -  $\alpha$ ,  $\omega$  - dicarboxylic acid

无法找到该页

Wherein R / be hydrogen or methyl or their mix (in different molecules), n is the integer by 0-5000, this method includes that corresponding polyoxyalkylene glycol and the stable nitroxide free radical that has a following posture in the presence of the compound and oxidant that produce NO<sub>x</sub>, react in 0-100 DEG C temperature range, isolate polyoxyalkylene -  $\alpha$ ,  $\omega$  - dicarboxylic acid thereafter,

Wherein (1) (a) R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> With R<sub>4</sub> Each be the alkyl that alkyl, aryl or heteroatom substituted contain a 1-15 carbon atom, (b) R<sub>5</sub> With R<sub>6</sub> (i) each is alkyl (if the R who contains a 1-15 carbon atom - R<sub>6</sub> Be not the alkyl entirely), or be a 1-15 carbon atom

Page 1 of 4(4 items)

Translate Again

Description

Copyright © 2008 China Patent Information Center. All Rights Reserved

## Claim

Replace the alkyl, wherein the substituting group is hydrogen, cyanic acid,  $\text{CONH}_2$ ,  $\text{OCOCH}$ ,  $\text{O-COC}_2\text{H}_5$ , carbonyl, alkenyl, wherein the double key not with nitroxide part conjugation, or  $-\text{COOR}$ , wherein R be alkyl or aryl or (ii) common constitute contain two at least carbon atoms partly until two heteroatom O or N's ring, or (2)

The part with

The part can be the aryl respectively.

2, the method of claim 1, wherein stable nitroxide free radical is like the following formula

## Claim

Wherein  $R_7$ ,  $R_8$ ,  $R_9$  With  $R_{10}$  In each is the alkyl that alkyl, aryl or heteroatom substituted contain a 1-15 carbon atom,  $R_{11}$  With  $R_{12}$  In each is alkyl, hydrogen, aryl or substituted heteroatom.

3, the method of claim 2, wherein stable nitroxide free radical be selected from 2,2,6,6- tetramethyl - piperidine - 1- oxygen base, 4- pivaloyl amido - 2,2,6,6- tetramethyl piperidine - 1- oxygen base, 4- alkoxyl - 2,2,6,6- tetramethyl - piperidine - 1- oxygen base and their mixture.

4, any one method among the claim 1-3, wherein said production NOx's compound is a nitric acid.

5, any one method among the claim 1-4, 5mol% to 1000mol% is counted with the mole number of polyoxyalkylene glycol to the compound quantity scope that wherein produces NOx.

## Claim

6, any one method among the claim 1-5, wherein said polyoxyalkylene glycol contacts with said stable nitroxide free radical, then adds said production NOx's compound and said oxidant.

7, any one method among the claim 1-6, 1mol% to 500mol% is counted with the mole number of polyoxyalkylene glycol to wherein stable nitroxide free radical quantity.

Page 4 of 4 (4 items)

Translate Again

Description

Copyright © 2008 China Patent Information Center. All Rights Reserved